Who Are The Uninsured in Rhode Island?

Demographic Trends 1990-2004, Access to care, and Health Status for the Under 65 Population

2004 Update

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November 2006

Funded by:

RI HRSA State Planning Grant

Acknowledgements

This chartbook was prepared by the RI Medicaid Research and Evaluation Project with funds from the RI HRSA State Planning Grant. The Health Interview data sets were provided by the Rhode Island Department of Health (RI DOH) as part of an interagency agreement for data sharing between RI DOH and RI DHS.

The author would like to thank Jane Griffin of MCH Evaluation for guiding every step of this project. In addition, staff from the Health Statistics Branch of the RI DOH – Jay Buechner, Jana Hesser, and especially Janice Fontes – provided all manner of support, including cleaned data, documentation, and advice. Brian Robertson of Market Decisions was very helpful in explaining the inner workings of the data collection and the resulting data. Members of the Evaluation Studies Workgroup at RI DHS provided valuable feedback to an early draft.

Karen Bogen, Ph.D. RI Medicaid Research and Evaluation Project November 2006

NOTE: If you would like a full page print-out of this report or graphs, go to our website: www.ritecare.ri.gov

Table of Contents

Section 1: Introduction, Background, and Methods P		
Background	10	
Purpose of the Chartbook	12	
Description of Data Source and Methods	13	
Technical Notes		
National and state data	18	
Section 2: Findings		
Demographic trend data		
Trends in access to care		
Trends in health status		
Demographic characteristics of uninsured Rhode Islanders	20	
Measures for uninsured children	21	
Measures for uninsured full-time employed	21	
2004 Insurance coverage rates by demographic groups		

Section 3: Demographic Trends of Uninsured Rhode Islanders	Page
3-1. Percent of Rhode Islanders (< 65) uninsured in each year	26
3-2. Age	
	28
	29
·	30
	31
	32
3-8. Labor Force Status	33
3-9. Core City	34
Section 4: Access to Care Trends of Uninsured Rhode Islanders 4-1. Did not see doctor in past 12 months	36
4-2. Had a routine doctor visit in past 12 months	
4-3. Did not get needed medical care in past 12 months due to cost	38
4-5. Did not get needed dental care in past 12 months due to cost	40

Section 5: Health Status Trends of Uninsured RI'ers		
5-1. Excellent/very good health status (< 65)	44	
5-2. Asthma (< 65)	. 45	
5-3. Diabetes (< 65)		
5-4. Obesity (age 20-64)		
5-5. Current smoking (age 16-64)		
Section 6: Characteristics of Uninsured Rhode Islanders 2004 6-1: Age	50	
6-2: Gender	51	
6-3: Race/Ethnicity		
6-4: Marital status	53	
6-5: Education	54	
6-6: Family Income	55	
6-7: Labor Force Status	56	
6-8: Geographic distribution	57	

Section 7: Uninsured Children in Rhode Island 2004		
7-1. Rhode Island Children (< 18) uninsured in each year	60	
7-2. Uninsured Rhode Island Children (< 18) by age group	61	
7-3. Age distribution of uninsured Rhode Island Children (<18)	62	
7-4. Gender of uninsured Rhode Island Children (<18)	63	
7-5. Did not see doctor in past 12 months	64	
7-6. Had a routine dr. visit in past 12 months	65	
7-7. Did not get needed care due to cost	66	
7-8. Had a dental visit in past 12 months	67	

Se	ction 8: Uninsured Full-Time Employed 2004	Page
	8-1. Rhode Island full-time employed (age 18-64) who are uninsured	70
	8-2. Uninsured RI full-time employed – regular versus self-employed	71
	8-3. Age distribution of uninsured RI full-time employed (age 18-64)	72
	8-4. Gender distribution of uninsured RI full-time employed (age 18-64)	73
	8-5. Race/ethnicity of uninsured RI full-time employed (age 18-64)	74
	8-6. Marital status of uninsured RI full-time employed (age 18-64)	75
	8-7. Education of uninsured RI full-time employed (age 18-64)	76
	8-8. Family income of uninsured RI full-time employed (age 18-64)	77
	8-9. Geographic distribution of uninsured RI full-time employed (age 18-64)	78
	8-10. RI full-time employed (age 18-64) who did not see doctor in past 12 mos	79
	8-11. RI full-time employed (age 18-64) who did not have routine doctor visit	80
	8-12. RI full-time employed (age 18-64) who had dental visit in past year	81
	8-13. RI FT employed (age 18-64) who did not get needed med care due to cost	82
	8-14. RI FT employed (age 18-64) who did not get needed Rx due to cost	83
	8-15. RI FT employed (age 18-64) who did not get needed dental care due to cost	84
	8-16. RI FT employed (age 18-64) who did not get diagnostic test due to cost	85

Appendices	
Appendix 1. Demographics (weighted) for 2004 sample under age 65	88
Appendix 2. Unweighted counts (denominators) for all charts	92
Appendix 3. Reliability of Estimates	99

Section 1: Introduction, Background, and Methods

Background

Recent Census Bureau data report a rise in the national uninsured rate from 15.6% in 2004 to 15.9% in 2005. In addition, the rate of coverage through employment-based health insurance has decreased from 59.8% in 2004 to 59.5% in 2005, while the coverage through government health insurance programs has stayed the same at 27.3%. Nationally, health insurance coverage for children remains better than for adults, with 11.2% without insurance in 2005, higher than the 10.8% in 2004.

The <u>nationally-collected</u> Census Bureau data for Rhode Island indicate that **health insurance coverage** for Rhode Islanders is higher than the national average, with the state uninsurance rate at 11.4% for the 2004-2005 average. This is higher than (but not statistically significantly different from) what it was for 2003-2004, at 10.5%.

This report is based on <u>state-collected data</u>, the Rhode Island Health Interview Survey, and the data do not correspond precisely with the data collected nationally. Most importantly, the RI-based data collection asks about insurance coverage at the time of the interview. This means that those identified as "uninsured" are uninsured at the time of interview. For the national data (from the Current Population Survey, CPS), the questions ask about coverage over the course of a year. The "uninsured" in that data collection have had no insurance coverage of any type over the entire year. Based on this difference alone, one would expect CPS rates of uninsurance to be lower than those from the RIHIS, but they are not. Thus the discrepancy must be a result of other differences in the data collections. The table on the next page shows a comparison of uninsured rates from the two data collections for adults and children in 2004.

It is also important to note that the state data are from 2004, and the nationally-collected data suggest that the health insurance situation may have worsened since then. Thus, this report may represent a best-case-scenario discussion of the condition of the uninsured in Rhode Island.

National and RI rates of uninsurance in 2004 from CPS (national data collection) and RIHIS (state data collection)*

	2004 US, CPS	2004 RI, CPS	2004 RI, RIHIS
Uninsured all ages	15.6	10.9	8.6
Uninsured < age 18	10.8	7.2	4.2

^{*} See previous page for brief discussion of national versus state data collections.

Purpose of the Chartbook

This chartbook provides a portrait of Rhode Island's uninsured population, under age 65. Some charts show the trend in non-insurance since 1990 and provide the context for the charts that look at the data from 2004, the most recent data from the Rhode Island Health Interview Survey. The charts cover:

- characteristics of the under-age-65 population of uninsured in 2004,
- measures of access to care for the uninsured compared to the insured population,
- health status measures for the uninsured compared to the insured population, and
- information about two important population subgroups:
 - > children under age 18 and
 - > uninsured full-time employed.

This chartbook can be used by policymakers to look at trends in insurance coverage in Rhode Island between 1990 and 2004 and to compare the uninsured to the insured on many important measures. It can also be used to consider the insurance situation of two vulnerable subpopulations.

Description of Data Source and Methods

The data in this report are from four years of the Rhode Island Health Interview Survey (RIHIS 1990, 1996, 2001 and 2004), sponsored by the Rhode Island Department of Health. The RIHIS is based on a representative sample of telephone households in Rhode Island. The sample excludes group-quarter households (such as dorms and military barracks and institutions containing nine or more persons) as well as households without telephones.¹

In 2004, there were 2,620 households interviewed with a total of 6,742 individuals. In 2001, there were 2,600 households interviewed with a total of 6,877 individuals. In 1996, there were 2,580 households with a total of 6,583 individuals. In 1990, there were 2,588 households with a total of 6,536 individuals. The analyses in this report are based on individuals (not households) and are limited to those under age 65, as shown in the table on the next page.

1. For detailed information about the survey design and data collection, please see the following technical documents available from the Center for Health Data and Analysis, RI Department of Health:

Rhode Island Department of Health 2004 Interview Survey, Technical Documentation, Brian Robertson, Market Decisions, May 2005.

Rhode Island Department of Health 2001 Interview Survey, Technical Documentation, Brian Robertson, Market Decisions, May 2002.

1996 Rhode Island Health Interview Survey Technical Description, David Kovenock and Christine Kreider, Northeast Research, Inc., July 1997.

1990 Rhode Island Health Interview Survey Technical Description, Office of Health Statistics, RI Department of Health, Providence, RI.

	RI HIS Cases < age 65		
	Unweighted Weighted		
2004	5,835	891,848	
2001	6,022	866,856	
1996	5,865	NA (see below)	
1990	5,718	NA (see below)	

The data are weighted to compensate for different probabilities of selection at the sampling stage of the project (described in the HIS technical documents). I do not show the weighted population totals for 1996 and 1990 because the weights used in those years did not inflate up to population estimates; instead, in 1996 and 1990, the weights simply re-apportioned the sample size percentages based on the population. Unweighted sample sizes for each chart are provided in Appendix 2 of this report.

Technical Notes

The major limitation of the Rhode Island Health Interview Survey is that households without telephones are excluded, thus omitting some of the poorest households. As a result, it is expected that the data underestimate Medicaid participants and the uninsured, though the weighting adjusts for their omission.

This chartbook is based on the under-65 population in Rhode Island. The over-65 population reports extremely high insurance coverage (over 98% in 1990, 1996, 2001 and 2004) and, therefore, can skew comparisons of insured and uninsured.

All of the charts are based on weighted data, and rates are based on 50 or more unweighted cases.

Item missing data are excluded from all charts, except for income in 2001 and 2004, when missing data were imputed.

Appendix 1 compares the demographic characteristics (weighted) of the insured and uninsured and the total sample under age 65.

Appendix 2 gives the unweighted cell sizes used in each chart (for all four years, as appropriate).

Appendix 3 explains the reliability of the data.

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Section 2: Findings

- National and state data (see pages 10-11): Nationally-collected data indicate that Rhode Island has higher insurance coverage for the under 65 population than the national average. The proportion of uninsured for Rhode Island in 2004 was 10.9% and it was 15.6% for the US total. State-collected data show an even lower rate of non-coverage in the state (8.6%).
- <u>Demographic trend data</u> (see pages 26-34): After a big drop in overall uninsurance between 1996 and 2001 from 11.2% to 7.8%, the trend seems to have reversed, with an increase to 8.6% uninsured in 2004. The demographic trends, though, continue as they have since 1990, with the following groups remaining most vulnerable to lack of coverage: 18-34 year olds, Hispanics, non-marrieds, those lacking a high school diploma, those in or near poverty, the unemployed, and those living in core cities.

• Trends in access to care (see pages 36-41): Overall, measures indicate that the uninsured have less access to care than the insured, with many more of the uninsured reporting no doctor visit in the past 12 months (33%), missing medical (31.6%) or dental (31.4%) attention or a prescription drug (21.8%) due to cost, and being without a dental visit in the past year (54.8%). Since 1990, some of the differences in access to care between the insured and uninsured have increased. For measures of seeing a doctor or a routine doctor visit in the past 12 months, it does not appear so much that access has decreased for the uninsured; rather it has remained fairly steady or increased slowly for them while access has increased more quickly for the insured, thus creating a greater gap. For dental visits, the gap has widened (from about 18 to about 36 percentage points) because of a steep drop for the uninsured since 1990, while the insured have held steady.

- Trends in health status (see pages 44-48): The uninsured, as a group, self-report lower health status than the insured and the trend is a widening gap, as the insured hold steady at between two-thirds and three-quarters reporting excellent or very good health, while the uninsured have dropped to only about half (54%) reporting so. Despite this difference, we don't find big differences between the groups on specific diseases or conditions (asthma, diabetes, and obesity). We see a very big difference, however, in smoking, where the uninsured have always had a higher rate than the insured but have even more so now, as the insured have decreased their smoking since 1990 from about 25% to about 16%, while the uninsured have held steady at about one-third (33.4% in 2004).
- Demographic characteristics (see pages 50-57): The demographic characteristics of uninsured Rhode Islanders under age 65 are driven not only by the rate of non-insurance for the demographic group but also by that group's proportion in the population. Thus, while whites and the employed have very high rates of insurance coverage, their high proportion in the population makes them high percentages of the uninsured. The other important demographic characteristics of the uninsured are that they are majority male, not married, lacking higher education, living in the core cities, and poor or near poor. The table beginning on page 22 shows the insured and uninsured rates within different demographic groups, which highlights potential target groups for intervention.

- Measures for uninsured children (see pages 60-67): In comparing insured and uninsured children, the situation is similar to comparisons for the under 65 population overall: uninsured children report less access to care than insured children (less likely to have seen a doctor or had a routine visit in the past year, missed medical or prescription or dental needs due to cost, lack of recent dental visit). However, the differences in access to care for uninsured and insured children are much lower in magnitude than differences for adults.
- Measures for uninsured full-time employed (see pages 70-85): For this report, full-time is defined as working 30 or more hours per week. The full-time self-employed have seen a big jump in uninsurance since 2001, from 12.6% to 18.5%, while the full-time regular employed have held steady at around 7%. Looking at the uninsured full-time employed as a group, they are dominated by 25-44 year olds, men, white/non-Hispanics, non-marrieds, and the less educated. Comparing the insured and uninsured full-time employed, the same pattern emerges in this subgroup as in the under 65 population as a whole: the uninsured have less access to care -- fewer doctor and routine visits, fewer dental visits, more missed medical and dental care, prescriptions, and diagnostic tests due to cost.

2004 Insurance coverage rates for different demographic groups, under age 65

(each line totals across to 100% for that group)

	Insured	Uninsured
Age <18	95.8	4.2
Age 18-34	84.2	15.8
Age 35-64	92.3	7.7
Male	89.6	10.5
Female	93.2	6.8
White/non-Hispanic	93.3	6.7
Black/non-Hispanic	85.3	14.7
Hispanic	79.8	20.2
Other/non-Hispanic	93.7	6.3

2004 Insurance coverage rates for different demographic groups, under age 65, continued

(each line totals across to 100% for that group)

	Insured	Uninsured
Married	94.3	5.8
Not married (incl. cohabit)	82.7	17.3
Other (widow, divorce, separated)	88.3	11.7
Less than high school	77.3	22.7
Completed HS/GED	85.0	15.0
More than HS education	95.0	5.0
Less than 200% FPL	81.4	18.7
200-299% FPL	89.4	10.6
300-399% FPL	94.3	5.8
400+% FPL	97.4	2.6

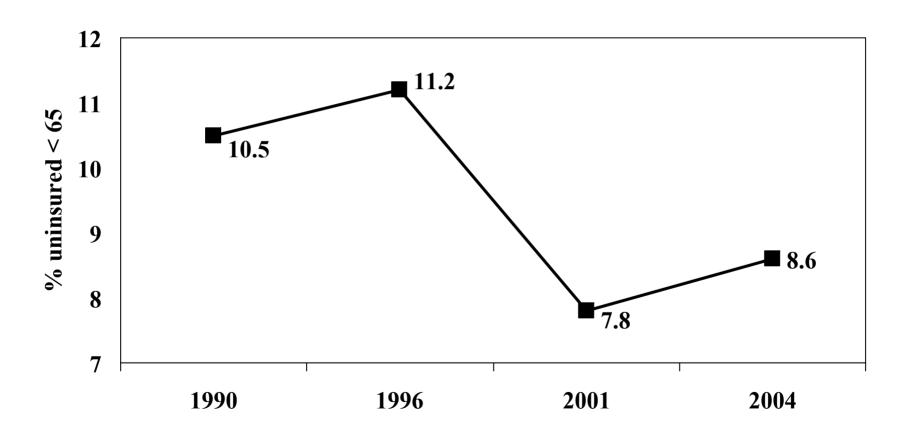
2004 Insurance coverage rates for different demographic groups, under age 65, continued

(each line totals across to 100% for that group)

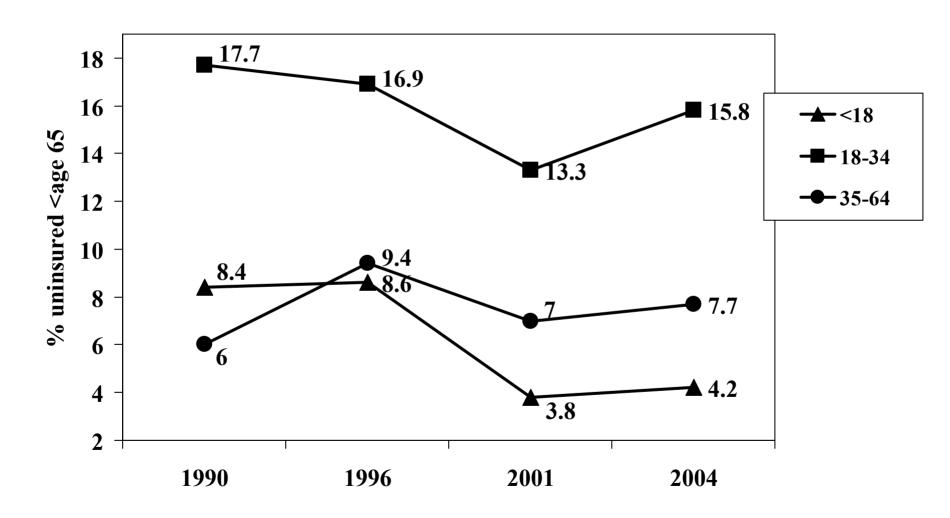
	Insured	Uninsured
Employed	91.0	9.1
Unemployed	55.2	44.8
Not in labor force	91.1	9.0
Not core city	94.1	5.9
Core city	86.4	13.6

Section 3: Demographic Trends of Uninsured Rhode Islanders 1990 - 2004

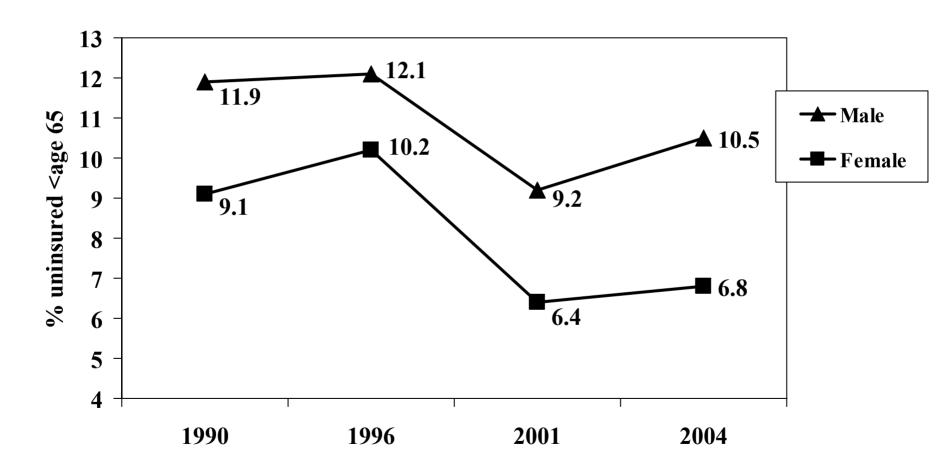
3-1. Percent of Rhode Islanders (< age 65) uninsured in each year: after a big drop from the mid-90's, the rate of uninsurance appears to be on the rise



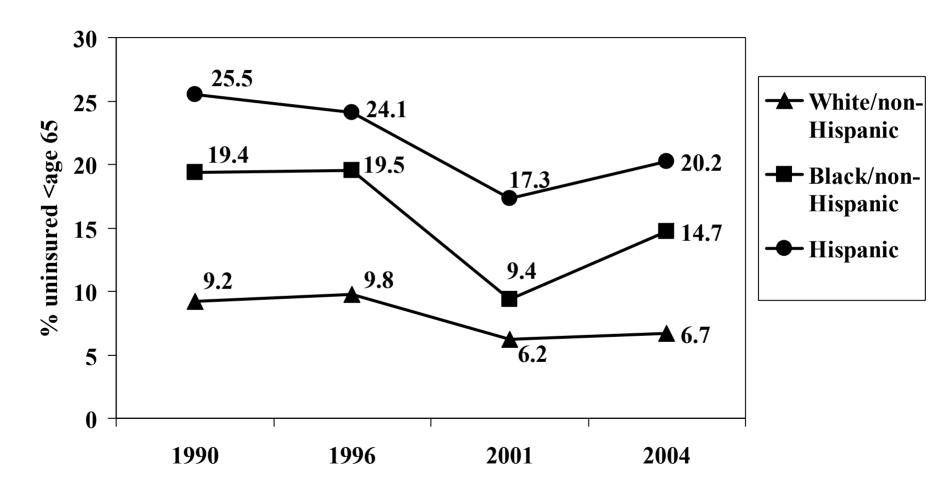
3-2. Uninsured Rhode Islanders (< age 65) by Age: non-coverage was and remains highest for 18-34 year olds



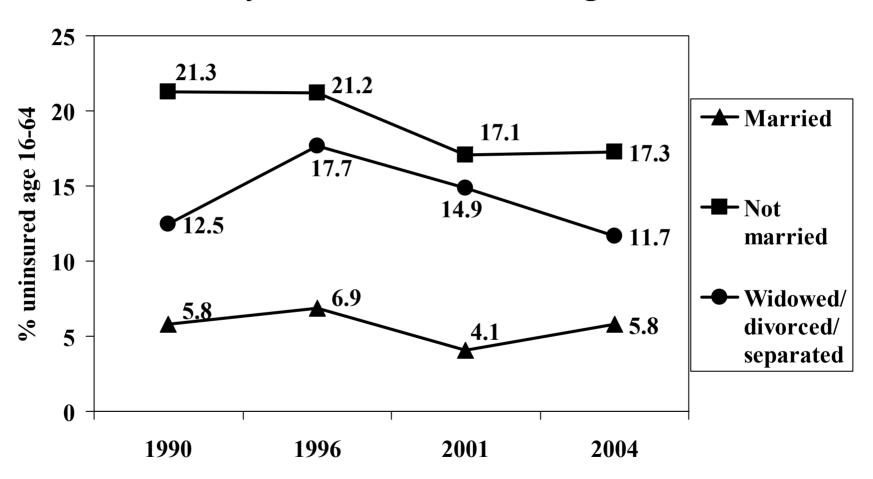
3-3. Uninsured Rhode Islanders (< age 65) by Gender: males have higher non-coverage than females



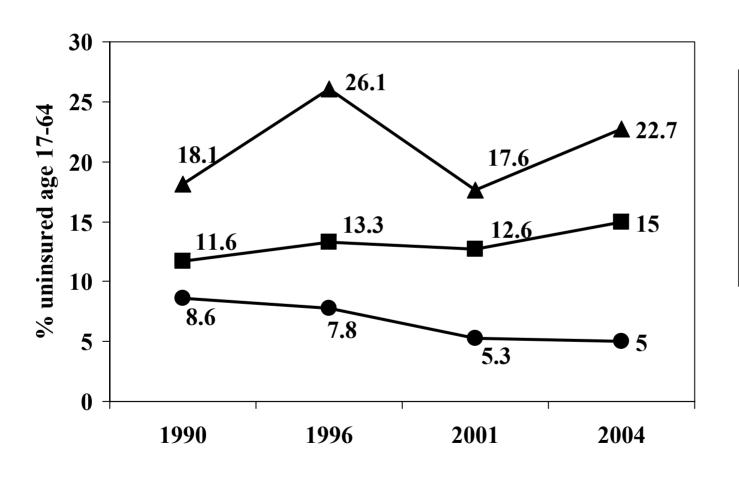
3-4. Uninsured Rhode Islanders (< age 65) by Race/Ethnicity: Hispanics had and have the highest non-coverage, and the gap which had decreased in 2001, appears to be widening

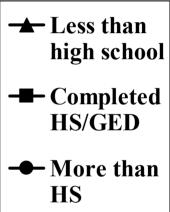


3-5. Uninsured Rhode Islanders (age 16-64) by Marital Status: non-marrieds are most likely to be without coverage

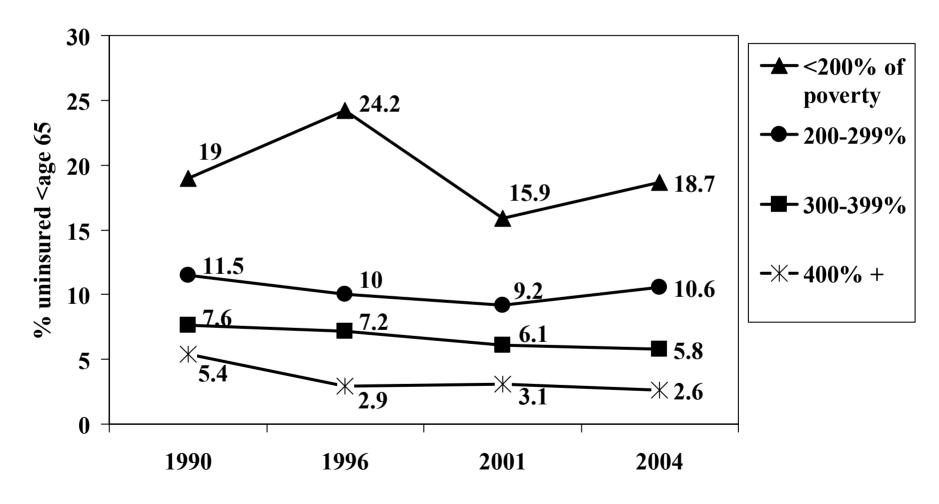


3-6. Uninsured Rhode Islanders (age 17-64) by Education: education is highly correlated with coverage, with less education associated with higher non-coverage

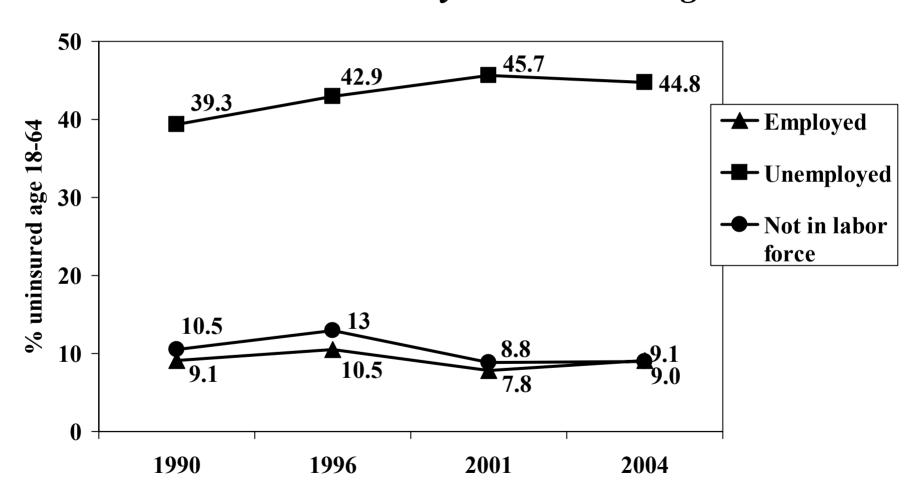




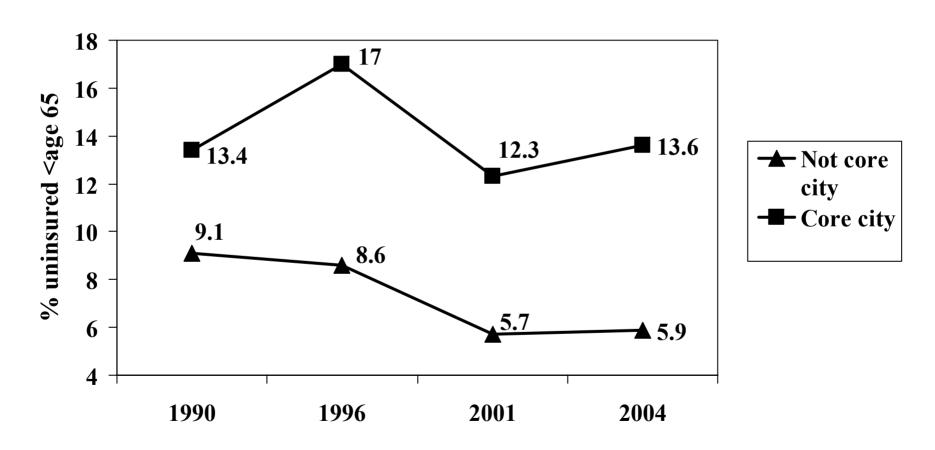
3-7. Uninsured Rhode Islanders (< age 65) by Family Income (as a % of FPL): the poor and near poor are the most likely to not have coverage and the gap is widening



3-8. Uninsured Rhode Islanders (age 18-64) by Labor Force Status: unemployed are much more likely to lack coverage

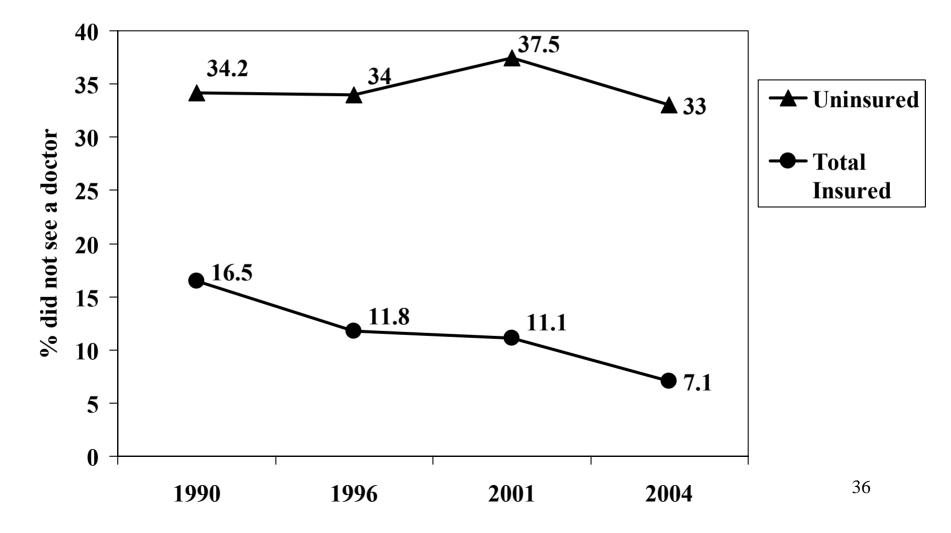


3-9. Uninsured Rhode Islanders (< age 65) by Core City: non-coverage is higher in core cities but has decreased a little since its peak in the mid-1990s

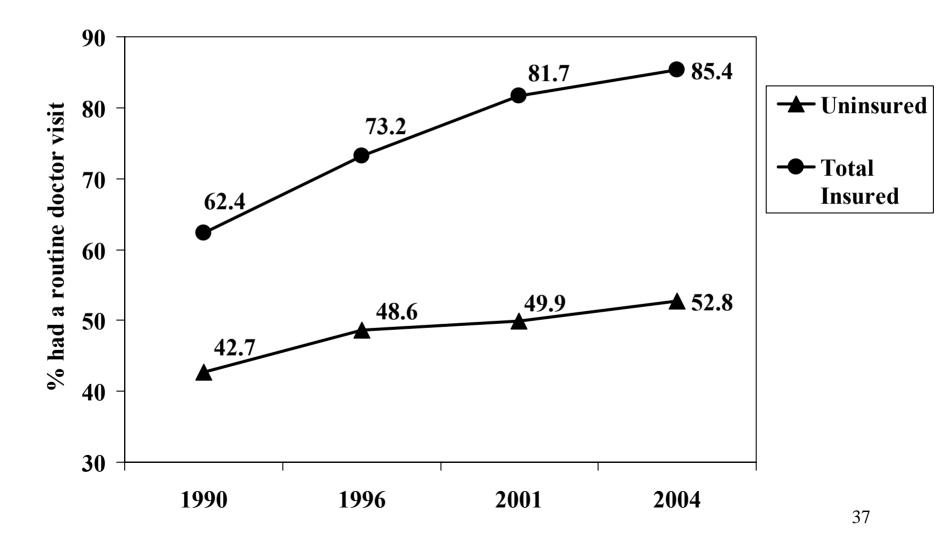


Section 4: Access to Care Trends of Uninsured Rhode Islanders 1990 - 2004

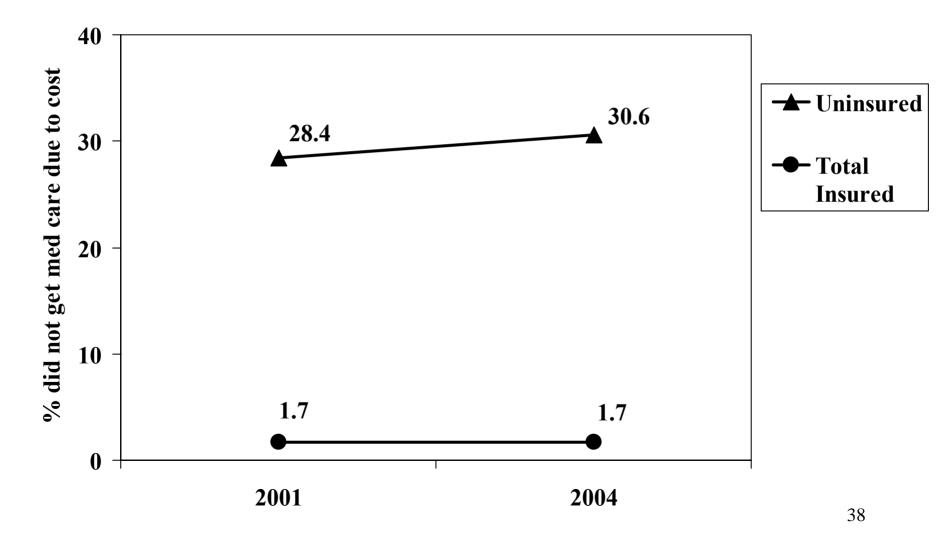
4-1. Percent of Rhode Islanders (< age 65) who did not see a doctor in the past 12 months: the trend for the insured is a decrease, while the uninsured have held steady at about a third reporting NO doctor visit in the previous year



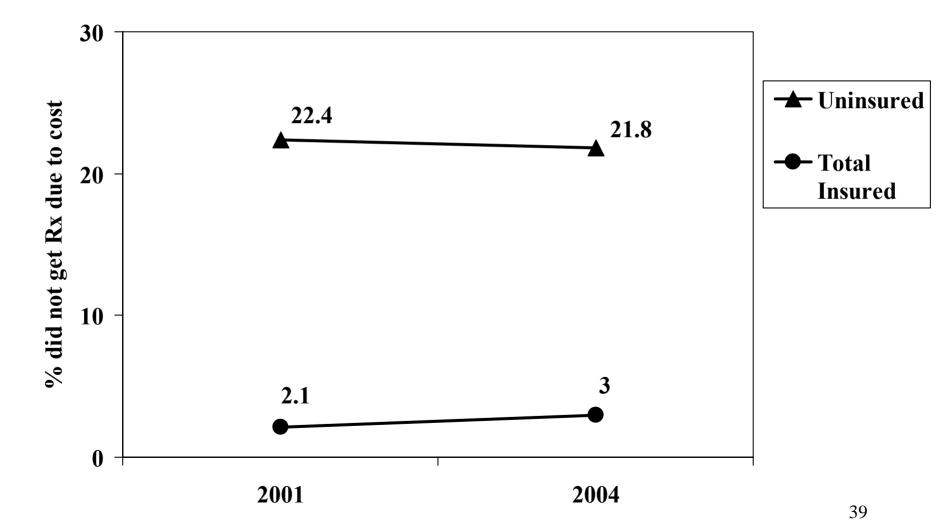
4-2. Percent of Rhode Islanders (< age 65) who had a routine doctor visit in the past 12 months: the trend for everyone is an increase in routine visits, but the increase is steeper for the insured



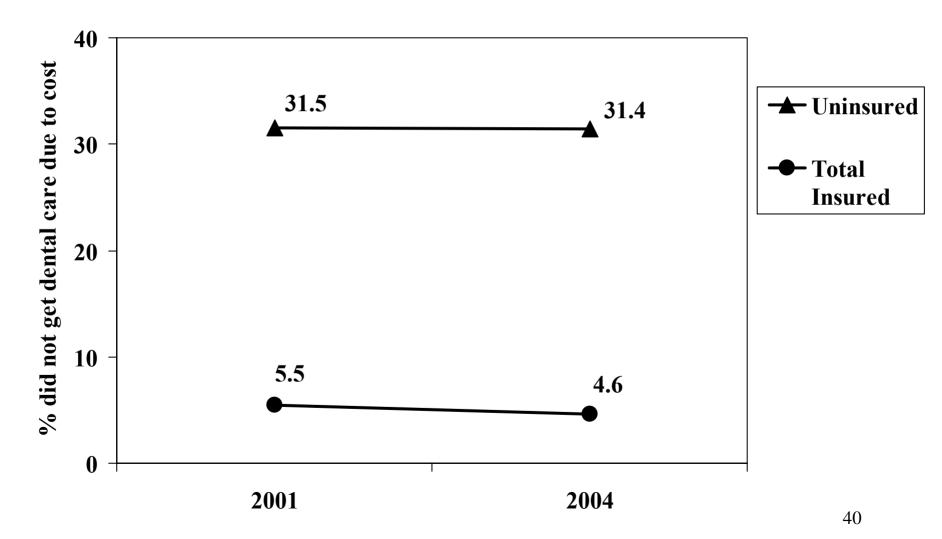
4-3. Percent of Rhode Islanders (< age 65) who did not get medical care from a doctor due to cost: the uninsured are much more likely to report missed care due to cost in past 12 months



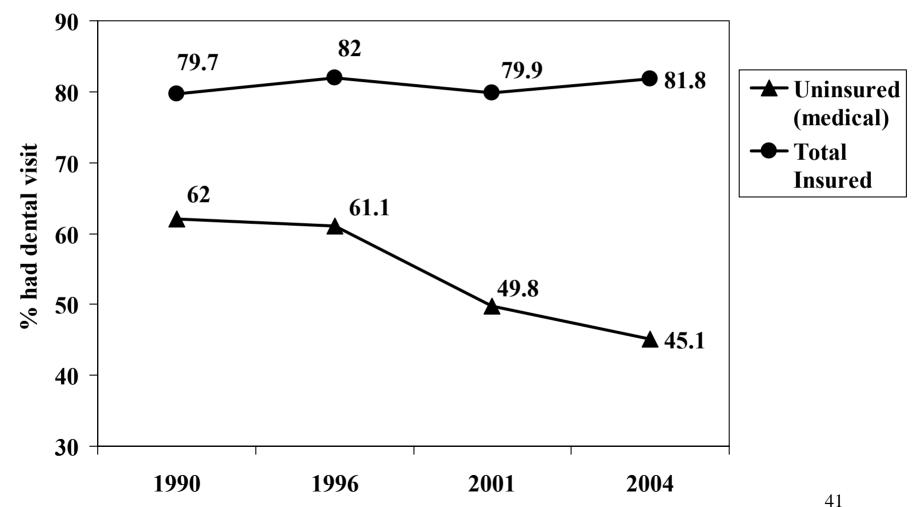
4-4. Percent of Rhode Islanders (< age 65) who did not get a prescription medication due to cost: the uninsured are much more likely to report missing a prescription due to cost in past 12 months



4-5. Percent of Rhode Islanders (< age 65) who did not get dental care due to cost: the uninsured are much more likely to report missed dental care due to cost in past 12 months



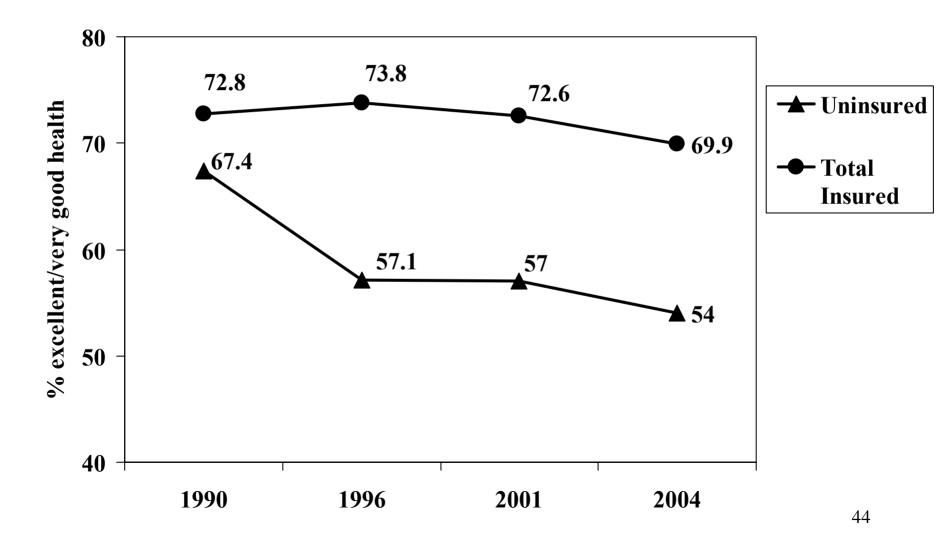
4-6. Percent of Rhode Islanders (< age 65) who had a dental visit in the past 12 months: the trend for the medically uninsured is a steep decline while the rate held fairly steady for the medically insured



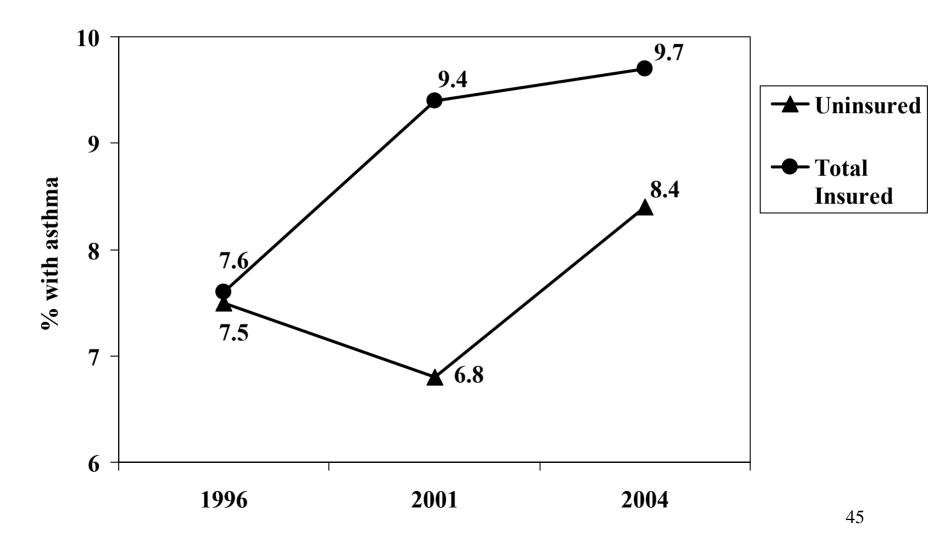
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Section 5: Health Status Trends of Uninsured Rhode Islanders 1990 - 2004

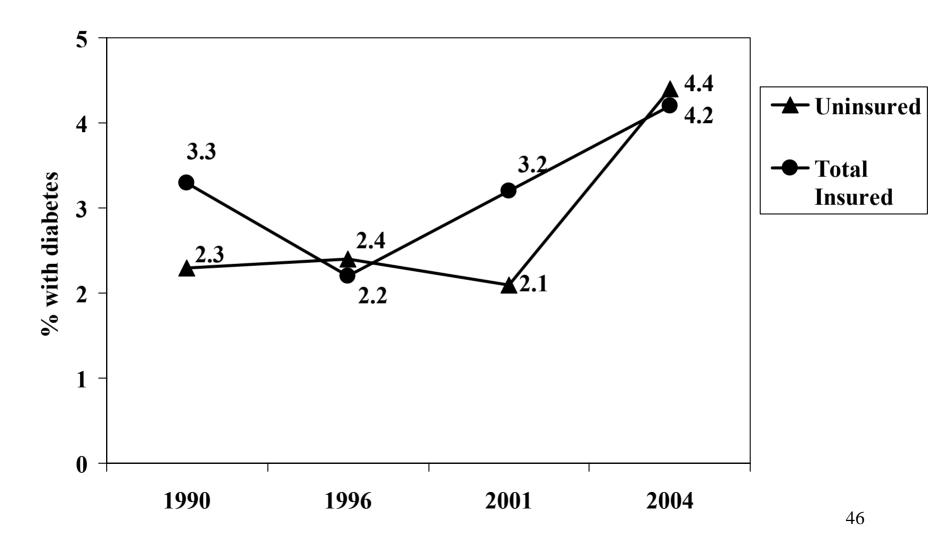
5-1. Percent of Rhode Islanders (< age 65) reporting excellent/very good health status: the trend for the uninsured is a decline while the rate held fairly steady for the insured



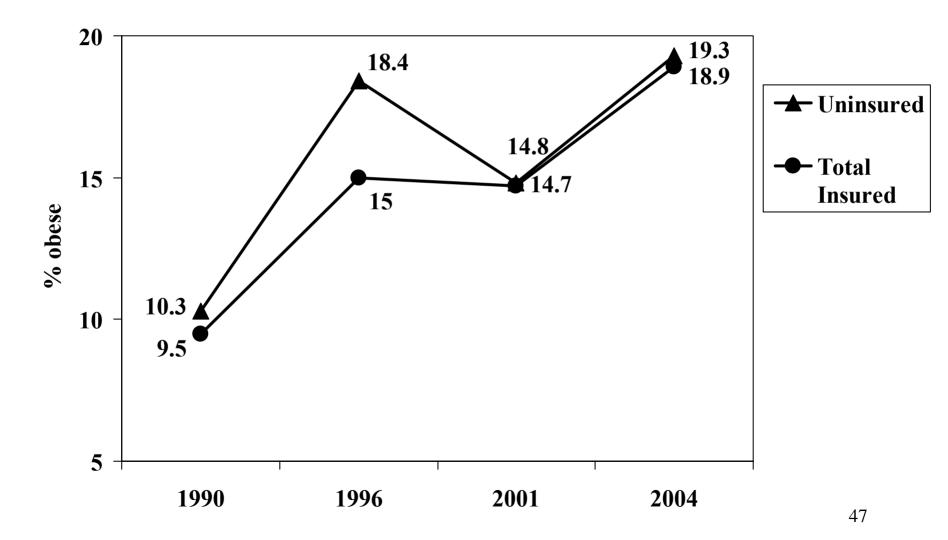
5-2. Percent of Rhode Islanders (< age 65) reporting asthma: the trend shows increases in asthma reports for the uninsured and the insured, but a little higher for the insured



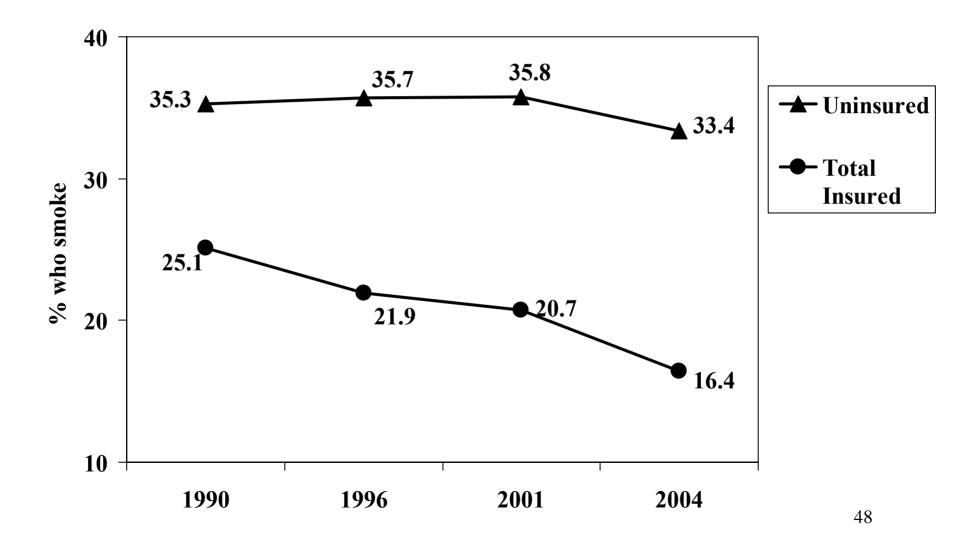
5-3. Percent of Rhode Islanders (< age 65) reporting diabetes (non-gestational): the trend shows recent increases in diabetes reports for both the uninsured and the insured



5-4. Percent of Rhode Islanders (age 20-64) with BMI in obese range: the trend shows parallel increases in obesity for the uninsured and the insured

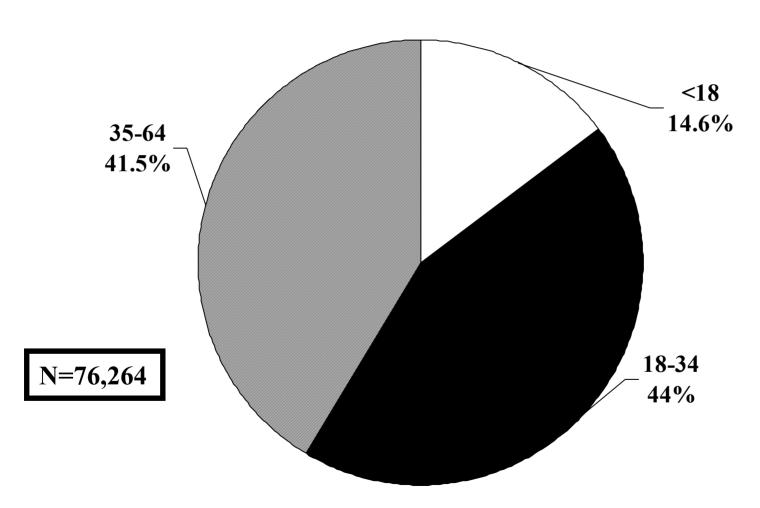


5-5. Percent of Rhode Islanders (age 16-64) who report smoking: the insured, who have had lower rates of smoking all along, have reduced their smoking over time, but the uninsured have not

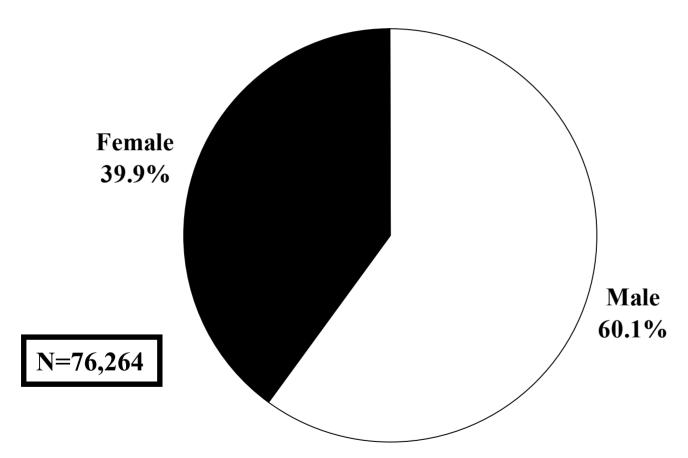


Section 6: Characteristics of Uninsured Rhode Islanders 2004

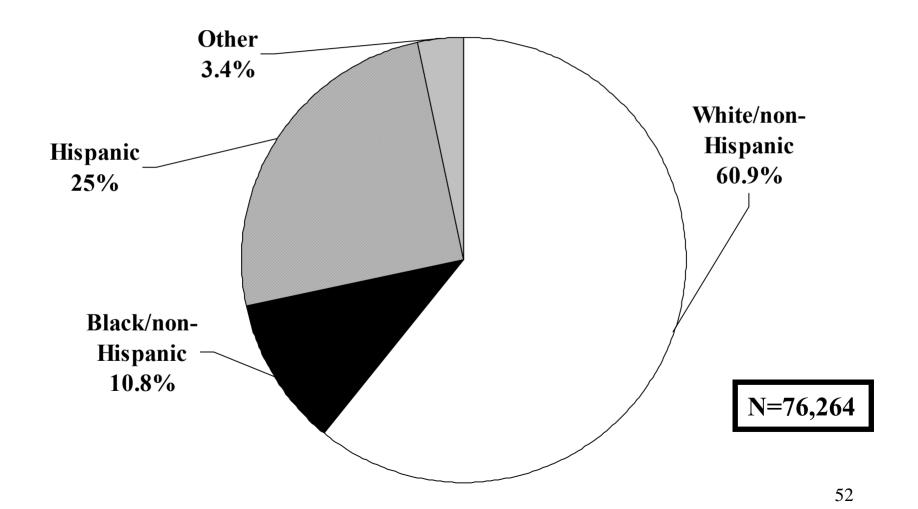
6-1: 2004 Age distribution of uninsured Rhode Islanders (< age 65): uninsured are fairly evenly split between those 18-34 and those 35-64, with the rest under 18



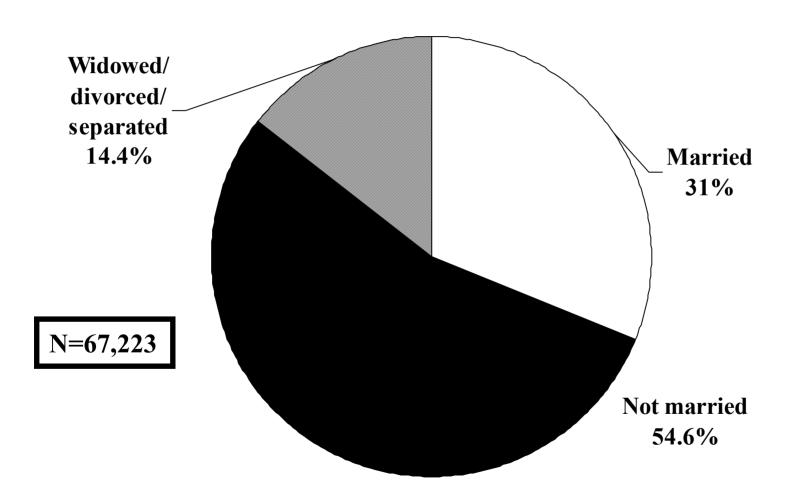
6-2: 2004 Gender of uninsured Rhode Islanders (< age 65): uninsured group is made up more of men than women



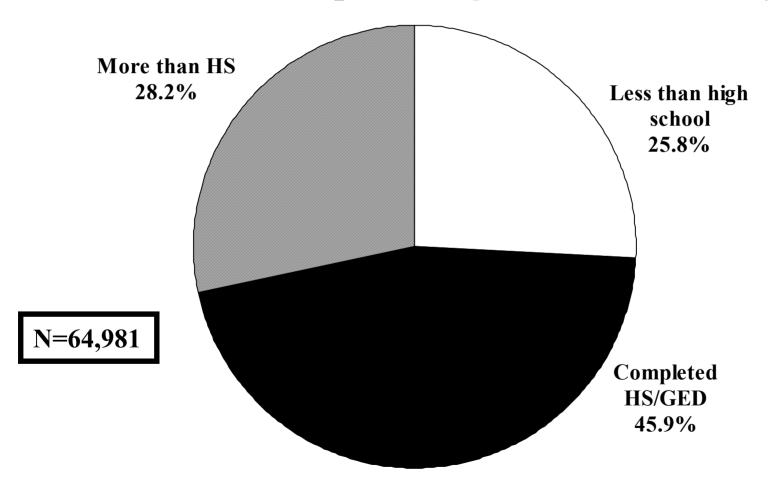
6-3: 2004 Race/Ethnicity of uninsured Rhode Islanders (< age 65): white/non-Hispanics make up the majority of the uninsured, followed by Hispanics



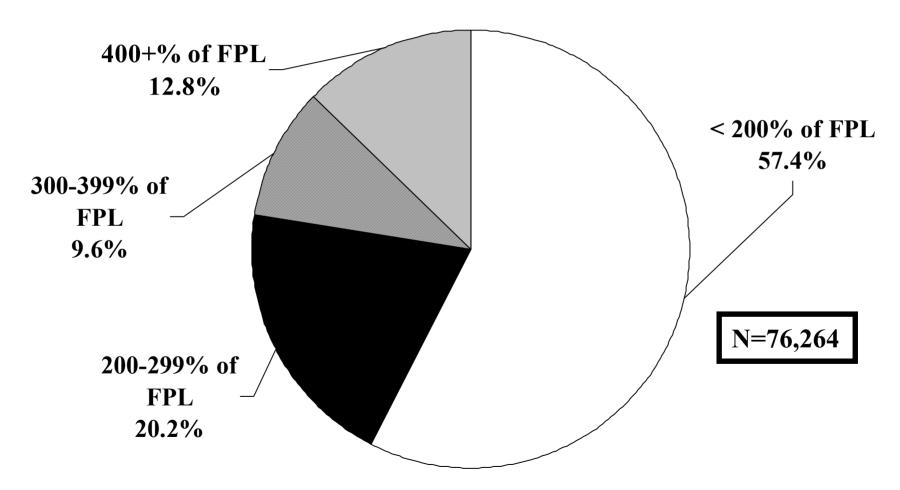
6-4: 2004 Marital status of uninsured Rhode Islanders (age 16-64): over half of the uninsured are not married



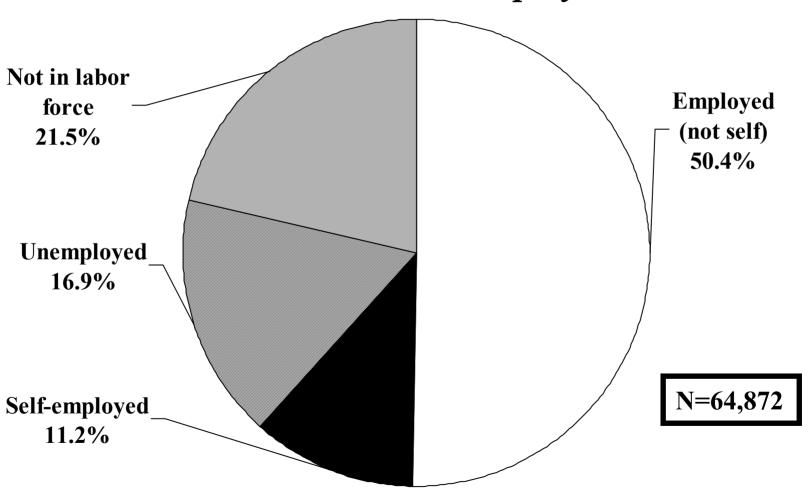
6-5: 2004 Education of uninsured Rhode Islanders (age 17-64): nearly half of the uninsured have completed high school/GED only



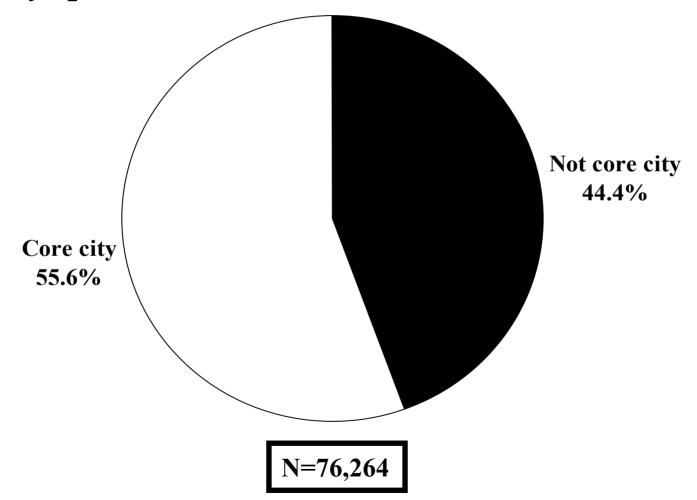
6-6: 2004 Family Income of uninsured Rhode Islanders (< age 65): over half of the uninsured are poor or near-poor, just above the poverty line



6-7: 2004 Labor Force Status of uninsured Rhode Islanders (age 18-64): half of the uninsured are employed



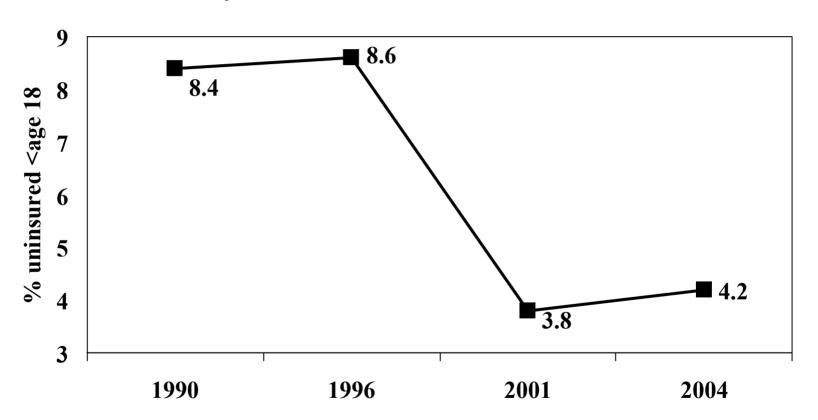
6-8: 2004 Geographic distribution of uninsured Rhode Islanders (< age 65): uninsured are fairly evenly split between core cities and non-core cities



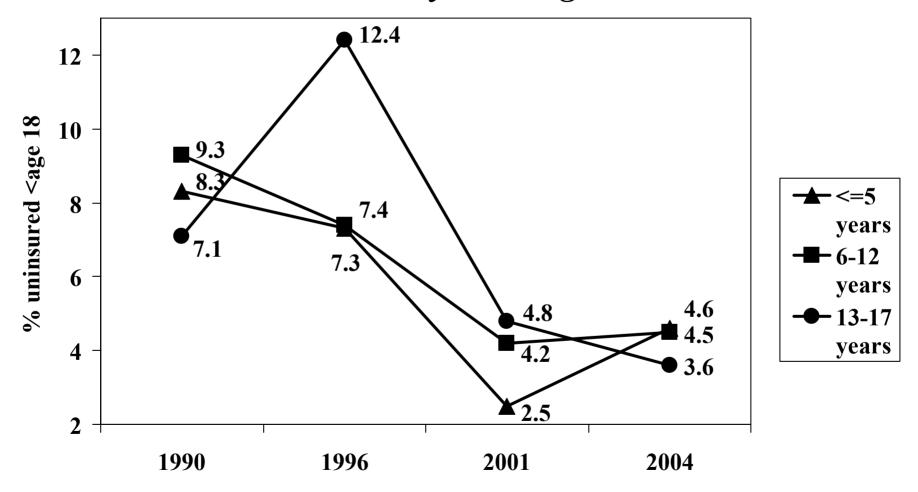
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Section 7: Uninsured Children in Rhode Island 2004

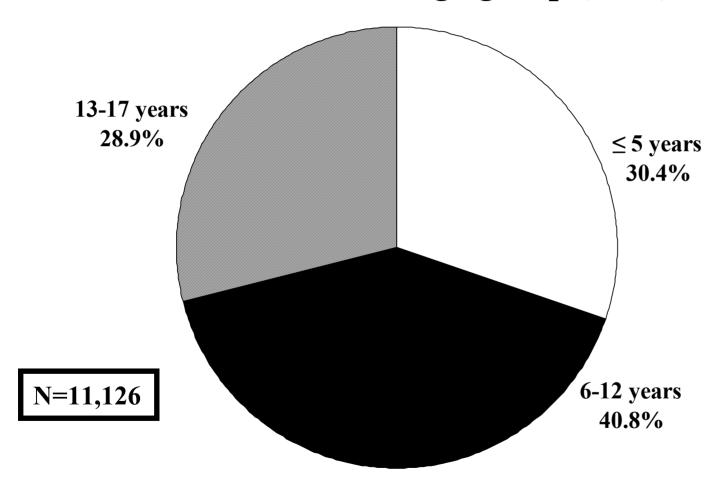
7-1. Percent of Rhode Island Children (< age 18) uninsured in each year: there was a noticeable drop between 1990/1996 and 2001, with only a small increase since then



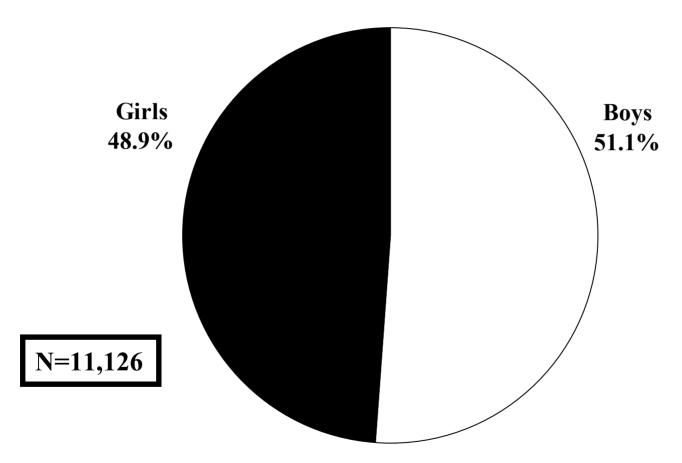
7-2. Uninsured Rhode Island Children (< age 18) by age group: coverage for the three age groups has nearly converged



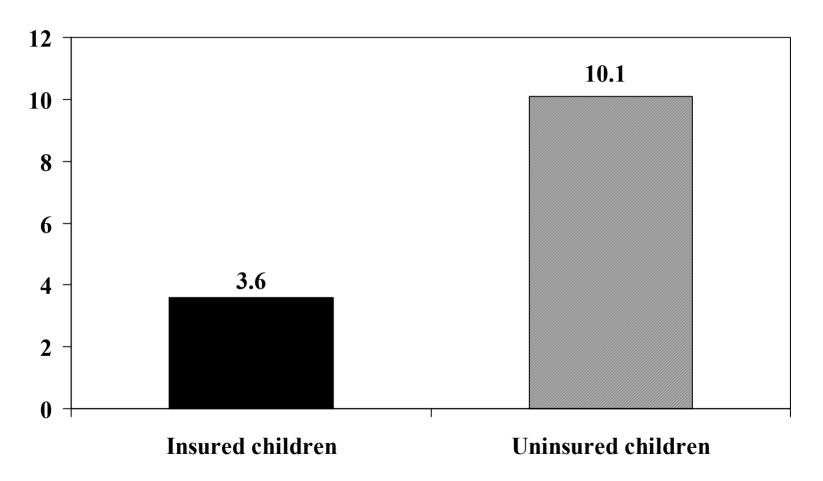
7-3. 2004 Age distribution of uninsured Rhode Island children (< age 18): uninsured are disproportionately in the middle age group (6-12)



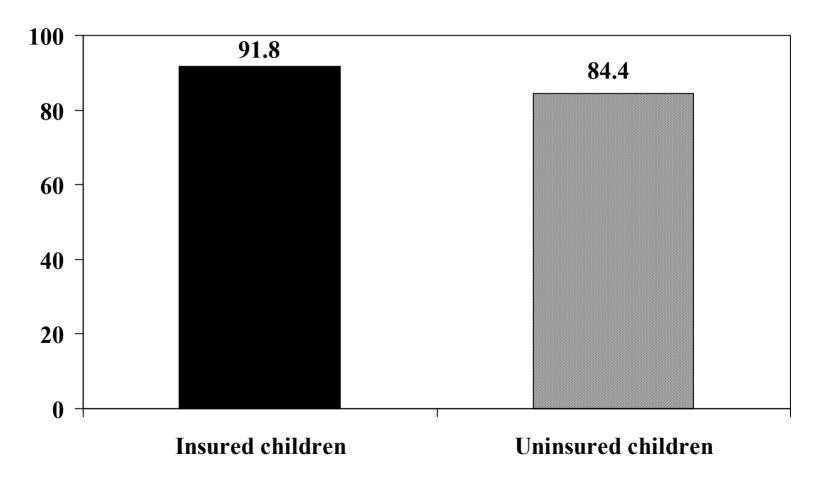
7-4. 2004 Gender of uninsured Rhode Island children (< age 18): uninsured group < 18 is nearly evenly divided between boys and girls



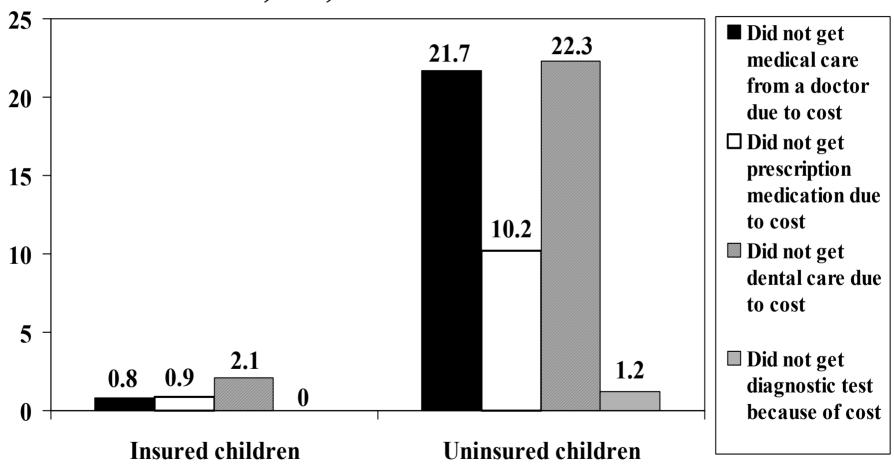
7-5. 2004 Percent of Rhode Island children (< age 18) who did not see a doctor in past 12 months: *the uninsured were more likely to report no doctor visit*



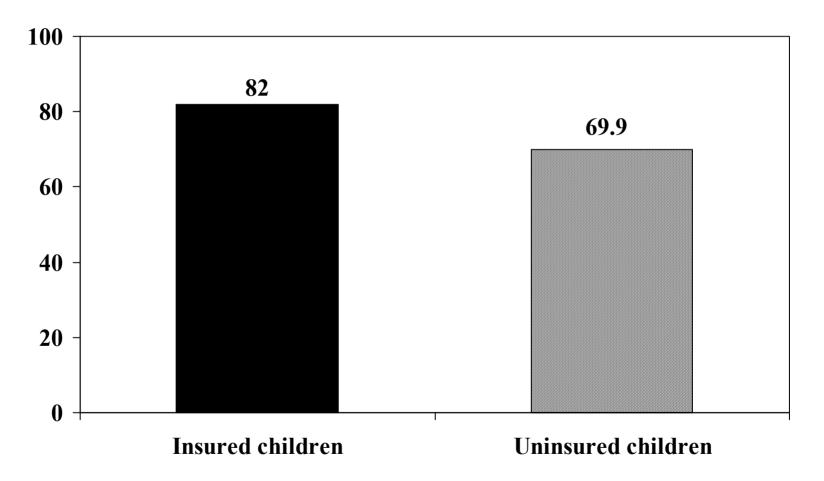
7-6. 2004 Percent of Rhode Island children (< age 18) who had a routine doctor visit in past 12 months: the uninsured were less likely to report routine doctor visit



7-7. 2004 Percent of Rhode Island children (< age 18) who did not get needed care in past 12 months: uninsured are much more likely not to get needed medical, Rx, or dental care due to cost



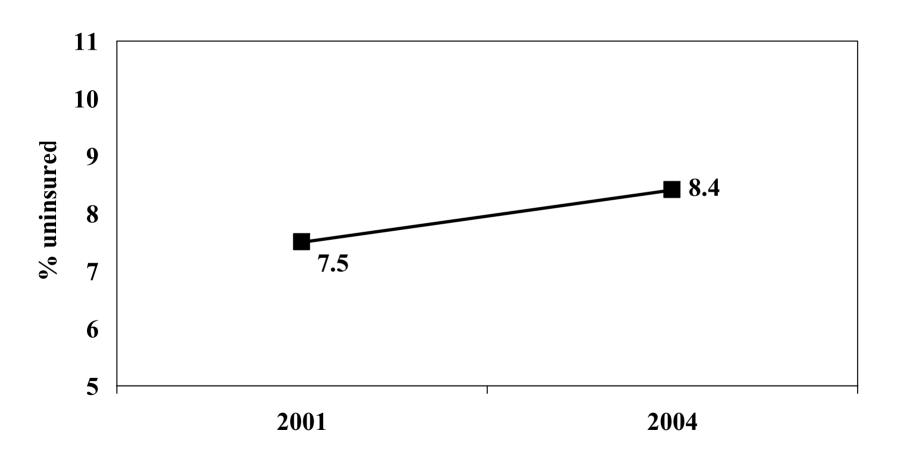
7-8. 2004 Percent of Rhode Island children (< age 18) who had a dental visit in the past year: the medically uninsured were less likely to report a dental visit



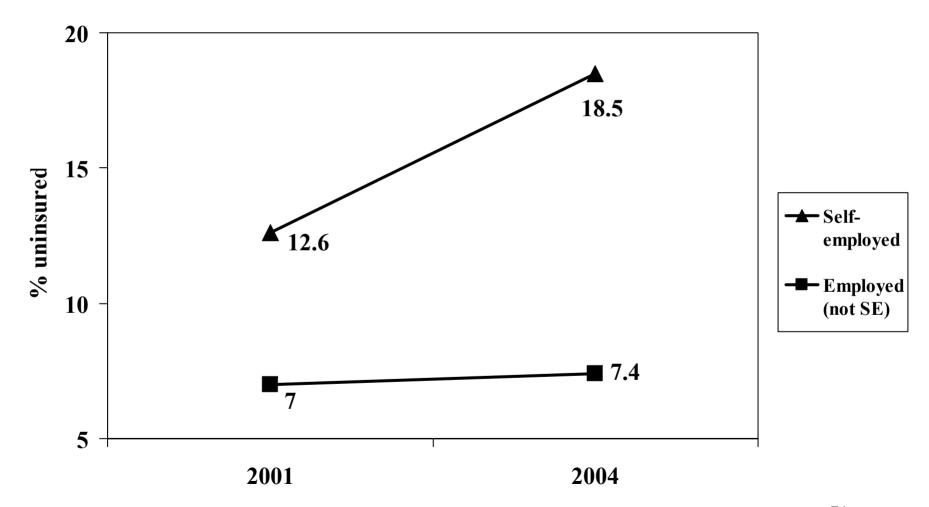
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Section 8: Uninsured Full-Time Employed (30+ hours per week) 2004

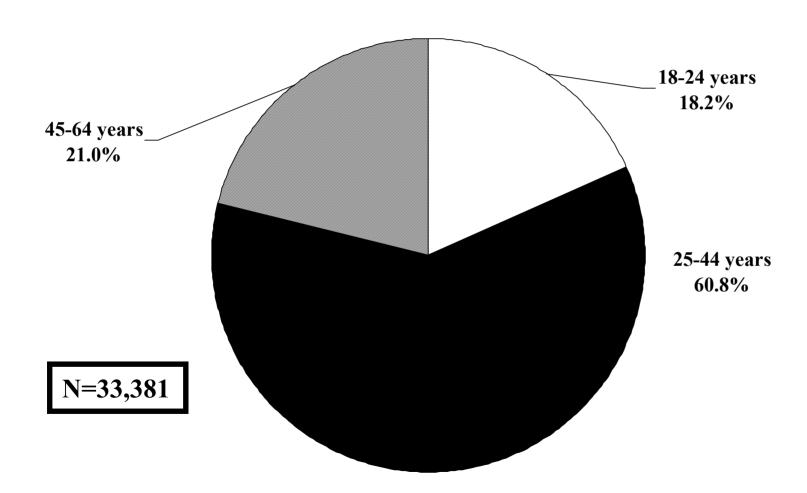
8-1: Percent of Rhode Island full-time employed (age 18-64) who are uninsured: there was an increase in the uninsurance rate for those working full time



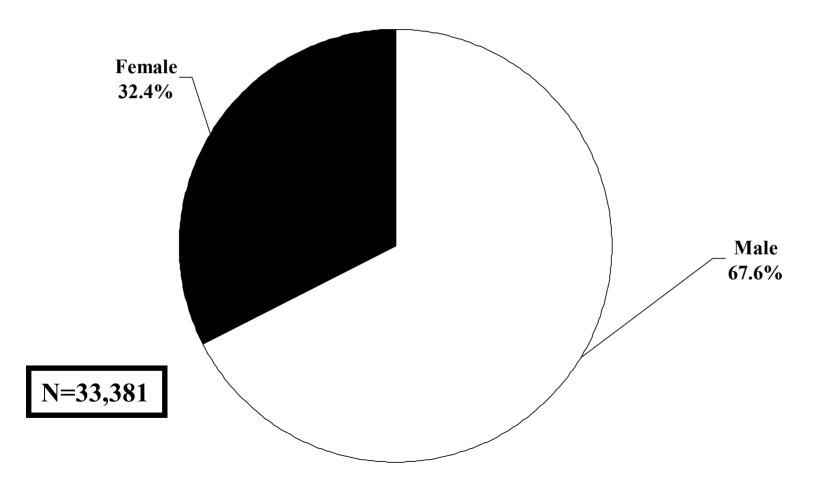
8-2: Uninsured Rhode Island full-time employed (age 18-64): lack of coverage for the self-employed has jumped since 2001, not so for regular employed



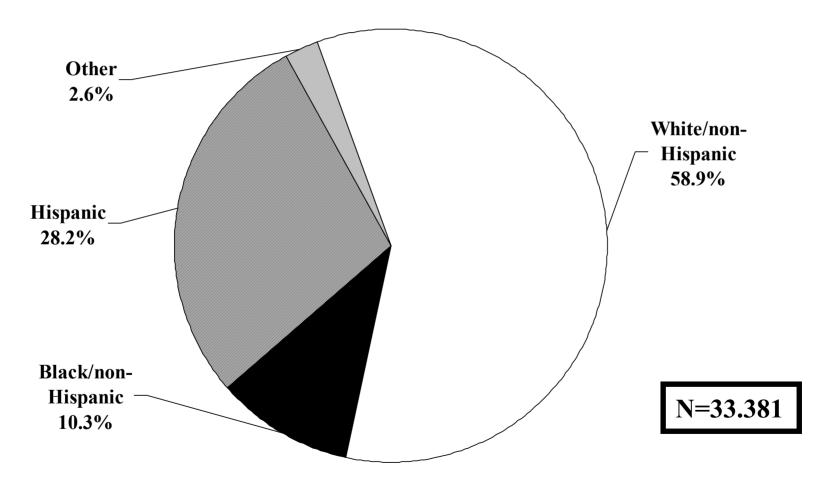
8-3: 2004 Age distribution of the uninsured full-time employed in Rhode Island (age 18-64): these uninsured are disproportionately in the middle age group (25-44 years)



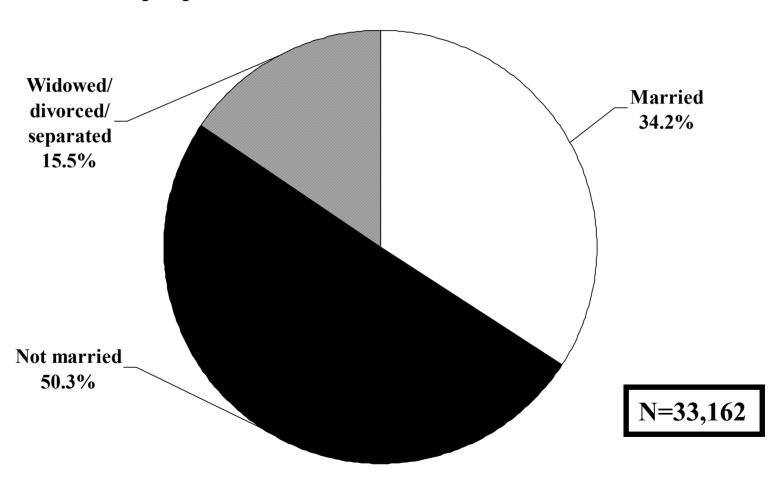
8-4: 2004 Gender of the uninsured full-time employed in Rhode Island (age 18-64): these uninsured are disproportionately male



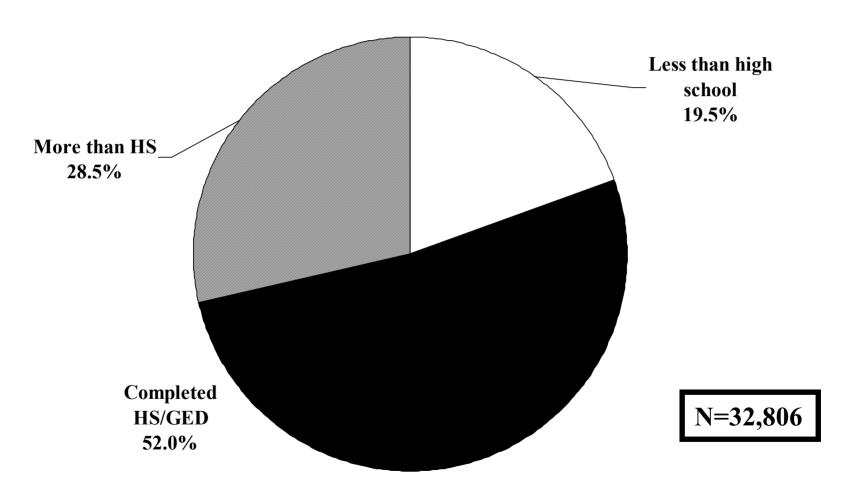
8-5: 2004 Race/Ethnicity of the uninsured full-time employed in Rhode Island (age 18-64): *most of these uninsured are white/non-Hispanic, followed by Hispanic*



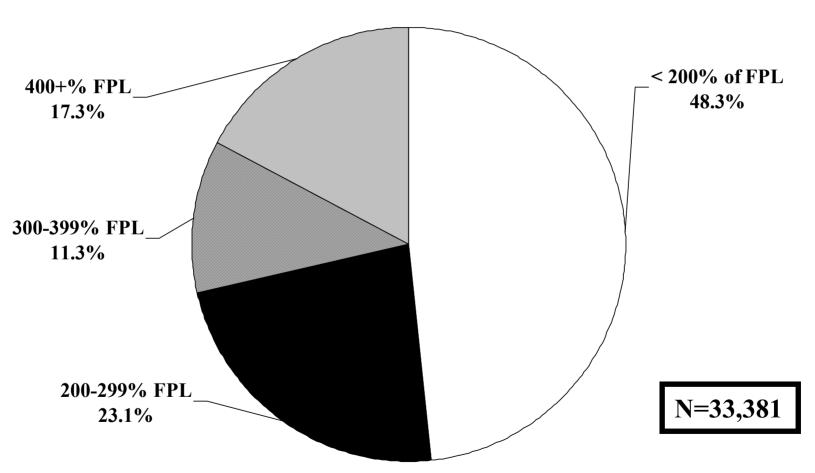
8-6: 2004 Marital status of the uninsured fulltime employed in Rhode Island (age 18-64): half of these uninsured are not married



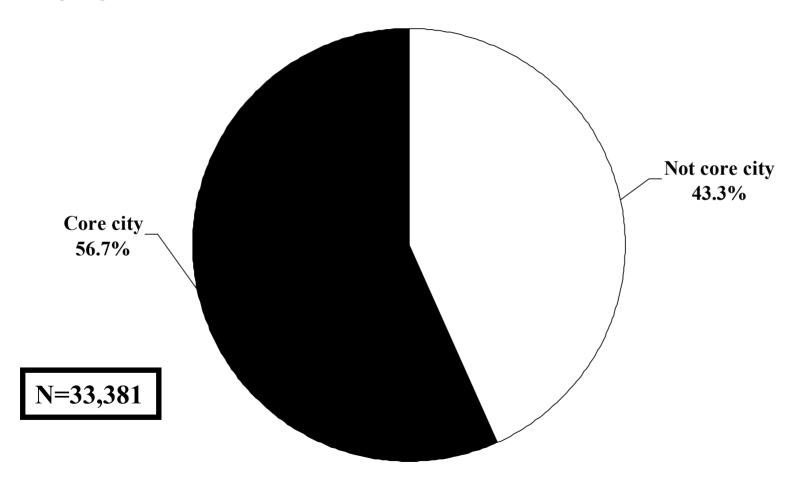
8-7: 2004 Education of the uninsured full-time employed in Rhode Island (age 18-64): over three-fourths of these uninsured have completed at least high school or GED



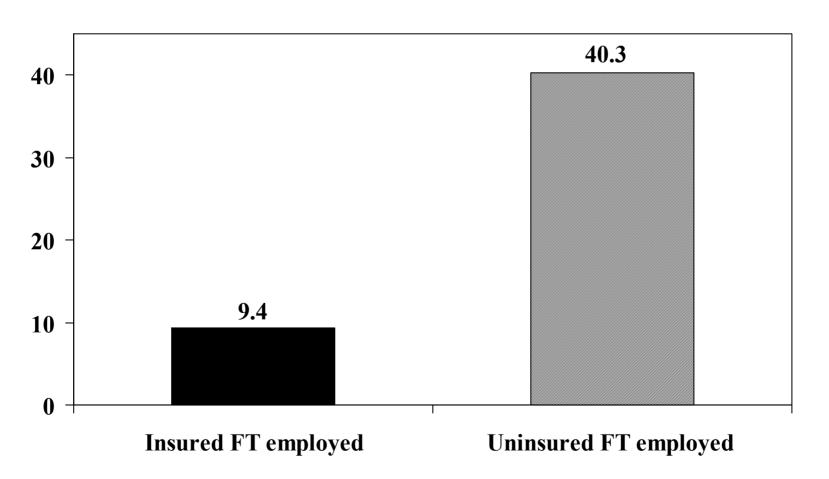
8-8: 2004 Family income of the uninsured employed in Rhode Island (age 18-64): nearly half of these uninsured are poor or near poor



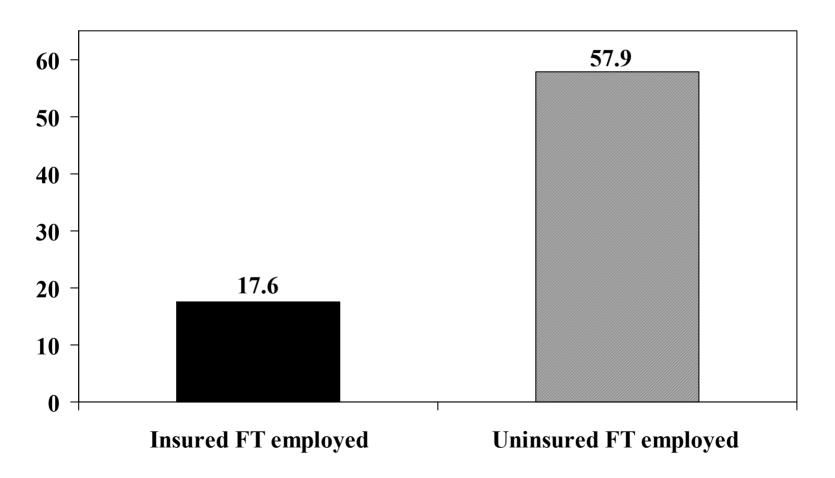
8-9: 2004 Geographic distribution of the uninsured employed in Rhode Island (age 18-64): *a little over half of these uninsured are in Rhode Island's core cities*



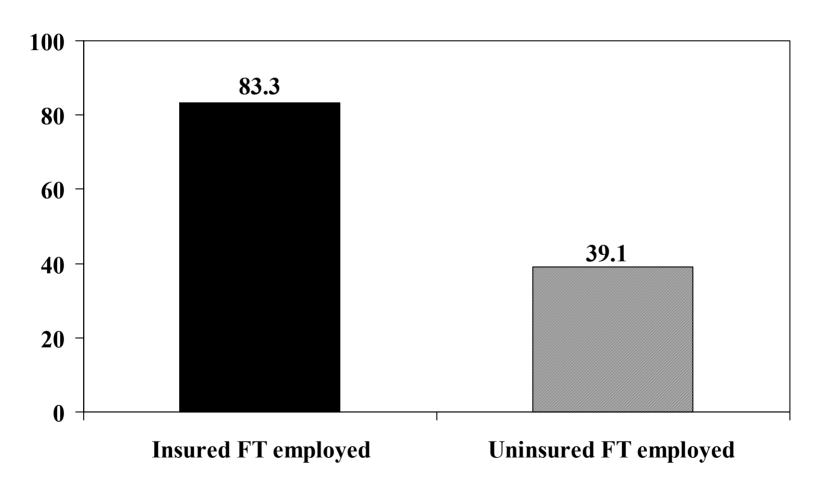
8-10: 2004 Percent of Rhode Island full-time employed (age 18-64) who did not see a doctor in the past 12 months: *the uninsured were more likely to report no doctor visit*



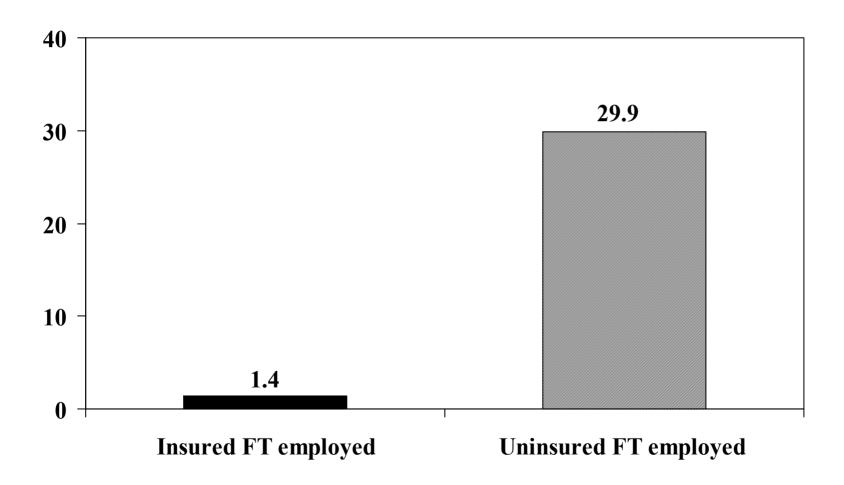
8-11: 2004 Percent of Rhode Island full-time employed (age 18-64) who did not have a routine doctor visit in the past 12 months: the uninsured were much more likely to report no routine visit



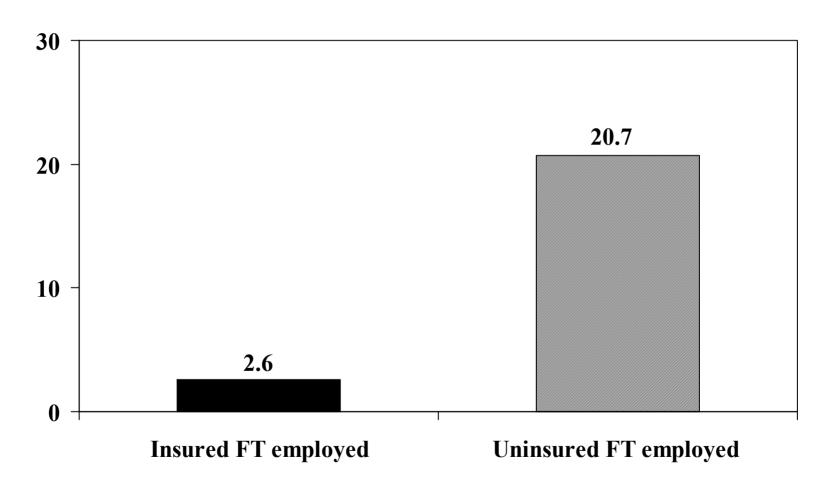
8-12: 2004 Percent of Rhode Island full-time employed (age 18-64) who had a dental visit in the past year: the medically insured were nearly twice as likely to report a dental visit in the past year



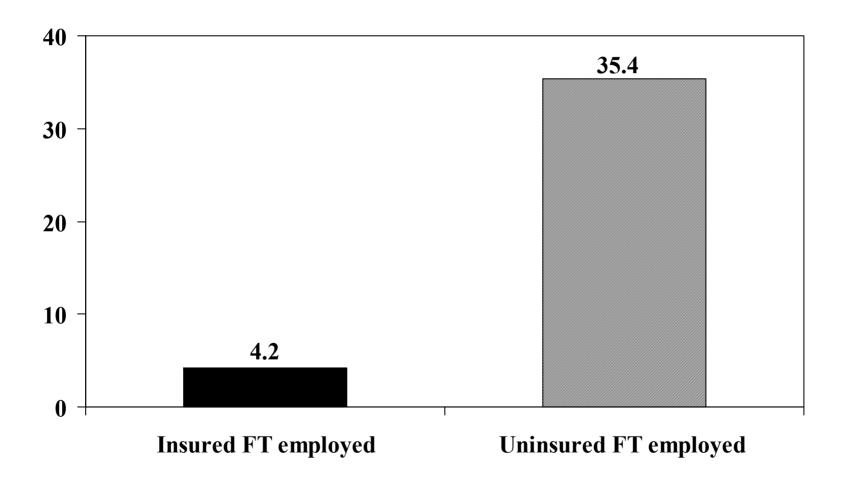
8-13: 2004 Percent of Rhode Island full-time employed (age 18-64) who did not get medical care from a doctor due to cost: the uninsured were much more likely to report missed medical care



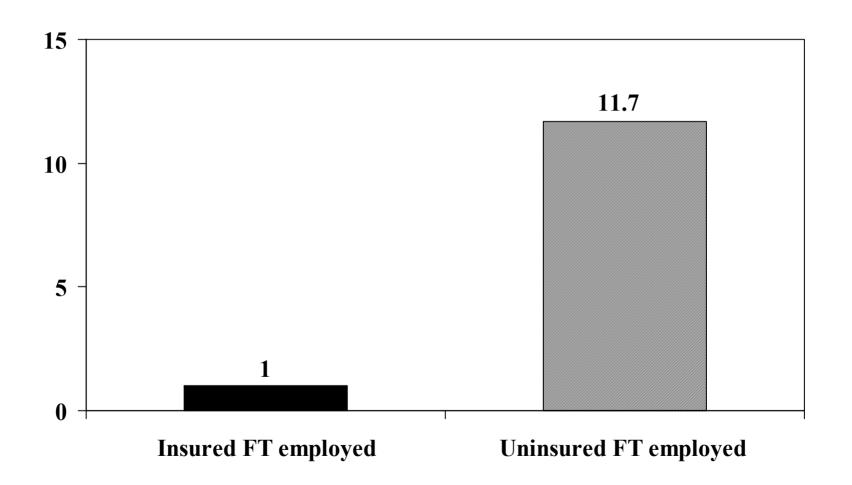
8-14: 2004 Percent of Rhode Island employed (age 18-64) who did not get a prescription medicine due to cost: the uninsured were much more likely to report missed medication



8-15: 2004 Percent of Rhode Island full-time employed (age 18-64) who did not get dental care due to cost: the medically uninsured were much more likely to report missed dental visits



8-16: 2004 Percent of Rhode Island employed (age 18-64) who did not get a diagnostic test due to cost: the uninsured were much more likely to report a missed diagnostic test



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Appendixes

Appendix 1. Demographics (weighted) for 2004 sample under age 65

	Total (886,598) (n=5801)	Insured (810,334) (n=5291)	Uninsured (76,264) (n=510)
Age <18	29.7	31.1	14.6
Age 18-34	23.9	22.0	44.0
Age 35-64	46.4	46.9	41.5
Male	49.5	48.5	60.1
Female	50.5	51.5	39.9
White/non-Hispanic	78.5	80.1	60.9
Black/non-Hispanic	6.3	5.9	10.8
Hispanic	10.6	9.3	25.0
Other/non-Hispanic	4.6	4.7	3.4

Appendix 1. Demographics (weighted) for 2004 sample under age 65, continued

	Total (886,598) (n=5801)	Insured (810,334) (n=5291)	Uninsured (76,264) (n=510)
Not core city	64.8	66.7	44.4
Core city	35.3	33.3	55.6
Less than 200% FPL	26.5	23.6	57.4
200-299% FPL	16.5	16.1	20.2
300-399% FPL	14.4	14.9	9.6
400+% FPL	42.7	45.5	12.8

Appendix 1. Demographics (weighted) for 2004 sample under age 65, continued

	Total (656,871)	Insured (589,648)	Uninsured (67,223)
Marital status for age 16-64 only	(n=4269)	(n=3822)	(n=447)
Married	55.2	57.9	31.0
Not married (incl. cohabit)	32.2	29.7	54.6
Other (widow, divorced, separated)	12.6	12.4	14.4
	Total (637,512)	Insured (572,531)	Uninsured (64,981)
Education for age 17-64 only			U
Education for age 17-64 only Less than high school	(637,512)	(572,531)	(64,981)
	(637,512) (n=4152)	(572,531) (n=3719)	(64,981) (n=433)

Appendix 1. Demographics (weighted) for 2004 sample under age 65, continued

Employment status for age 18-64 only	Total (621,977) (n=4054)	Insured (557,105) (n=3621)	Uninsured (64,872) (n=433)
Employed	71.0	72.1	61.6
Unemployed	3.9	2.4	16.9
Not in labor force	25.0	25.5	21.5

Appendix 2. Unweighted counts (denominators) for all charts

	1990	1996	2001	2004
Chart 3-1, sections 4 and 5 charts*				
Insured < age 65	5068	5044	5511	5291
Uninsured < age 65	563	724	466	510
Missing (not in chart)	87	97	45	34
Chart 3-2				
Under age 18	1648	1876	1861	1739
Age 18-34	1737	1470	1430	1229
Age 35-64	2246	2422	2686	2833
Chart 3-3				
Males	2773	2795	2875	2751
Females	2898	2973	3102	3050

All of the data in this table and the associated charts are for those under age 65.

^{*} Some of the section 4 and 5 charts are based on unweighted counts somewhat lower than shown, since cases missing a value on the analysis item were excluded from the percentages. The small number of missing values varied by item.

	1990	1996	2001	2004
Chart 3-4				
White/non-Hispanic	4830	4344	4427	4148
Black/non-Hispanic	308	438	447	557
Hispanic	362	793	847	824
Other race/ethnicity (not in chart)	115	173	256	272
Chart 3-5 (age 16-64)				
Married	2508	2381	2500	2411
Not married	1164	1187	1275	1288
Widowed/divorced/separated	479	506	502	570
Chart 3-6 (age 17-64)				
Less than high school	638	592	545	493
Completed high school/GED	1557	1436	1387	1283
More than high school	1838	1915	2230	2376

	1990	1996	2001	2004
Chart 3-7				
Less than 200% fpl	1156	1579	1636	1652
200-299% fpl	971	947	956	910
300-399% fpl	973	908	792	829
400%+ fpl	1830	1680	2593	2410
Missing (not in charts)	701	654		
Chart 3-8 (age 18-64)				
Employed	2805	2830	2987	2859
Unemployed	231	140	146	162
Not in labor force	955	921	946	1033

	1990	1996	2001	2004
Chart 3-9				
Not core city	3861	3655	3841	3564
Core city	1770	2113	2136	2237
Charts 6-1, 6-2, 6-3, 6-6, 6-8, 6-9				
Uninsured < age 65				510
Chart 6-4				
Uninsured age 16-64				449
Chart 6-5				
Uninsured age 17-64				441
Chart 6-7				
Uninsured age 18-64				435

	1990	1996	2001	2004
Chart 7-1 and 7-5 through 7-8**				
Insured children under age 18	1514	1695	1791	1664
Uninsured children under age 18	134	181	70	75
Missing (not in chart)	7	25	6	3
Chart 7-2				
Less than or equal to age 5	575	624	578	515
Age 6-12	637	774	801	672
Age 13-17	427	478	482	552
Chart 7-3, 7-4				
Uninsured children under age 18				75

^{**} Some of charts 7-5 through 7-8 (2004 only) are based on unweighted counts somewhat lower than shown (1664 insured children, 75 uninsured children), since I excluded missing values from the percentages. However, the total unweighted base for uninsured is always greater than 50.

	2001
Chart 8-1, 8-2 and 8-10 through 8-16***	
Age 18-64 full-time employed	1346
Uninsured women age 15-44	115
Missing (not in chart)	13
Chart 6-12, 6-13	
Uninsured women age 15-44	115

*** Some of charts 8-3 through 8-16 (2004 only) are based on unweighted counts somewhat lower than shown, since I excluded missing values from the percentages. However, the total unweighted base for uninsured is always greater than 50.

	2001	2004
Chart 8-1, 8-2 and 8-10 through 8-16***		
Age 18-64 full-time employed	2652	2579
Chart 8-3 through 8-9***		
Uninsured full-time employed age 18-64		216

*** Some of charts 8-3 through 8-16 (2004 only) are based on unweighted counts somewhat lower than shown, since I excluded missing values from the percentages. However, the total unweighted base for uninsured is always greater than 50.

Appendix 3. Reliability of Estimates

Sampling error or chance variation can cause the results of the RI Health Interview Survey to vary from those that would have been obtained with a census of all Rhode Islanders. The width of the confidence interval placed around the sample estimate varies according to several factors:

- How confident we want to be in our estimate (e.g., 99%, 95%, 90%)
- The size of the sample on which the estimate is based (e.g., 5000 unweighted cases or fewer)
- The extent of agreement by respondents on the particular item (e.g., almost all say yes (or no) and only a few say the opposite, or some other split in answers).

The confidence interval will be wider if we want to be more confident in our estimate (95% is traditional), when the sample size on which the estimate is based is small, and when respondents are more split in their answers (with a 50% split being least unanimous). The table on the next page lists the confidence intervals to be placed around the sample estimates for the proportion of the RI population with a given attribute in order to be 95% certain that the true estimate lies within that interval.

Appendix 3. Reliability of Estimates, cont.

Confidence Intervals to Allow for Sampling Error (95% confident)									
		Where sample estimate is approximately							
Sample size (n)	10% or 90%	10% or 90% 20% or 80% 30% or 70% 40% or 60% 50%							
6000	0.76	1.01	1.16	1.24	1.27				
5000	0.83	1.11	1.27	1.36	1.39				
4000	0.93	1.24	1.42	1.52	1.55				
2000	1.31	1.75	2.01	2.15	2.19				
1000	1.86	2.48	2.84	3.04	3.10				
750	2.15	2.86	3.28	3.51	3.58				
500	2.63	3.51	4.02	4.29	4.38				
300	3.39	4.53	5.19	5.54	5.66				
100	5.88	7.84	8.98	9.60	9.80				
50	8.32	11.09	12.70	13.58	13.86				

Numbers in table are percentage points to be added to/subtracted from sample estimates of population percentages in order to be 95% certain that the figure for the whole population actually falls within the interval.